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AUTHOR Frankel, Joanne
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ABSTRACT

Phase I of the Measurement of Respondent Burden is described. The focus of the study was upon correlates of self perceived respondent burden, i.e., factors associated with the presence of negative feelings such as annoyance, frustration or inconvenience which may be experienced by survey participants during face-to-face interviews at their homes. The effect of interview time (25- and 75-minute treatments) and respondent effort upon respondent burden was assessed. Interviews were conducted with 500 consenting persons in households located in a predominately white middle class suburb. Most questions sought factual information, rather than opinion or attitude data. Results indicated: (1) no relationship was found between interview length (IL) and overall item nonresponse; (2) IL was associated with willingness to be re-interviewed with 14 percent more of the short interview subjects willing to allow the interviewer to return next year; (3) IL affected attitudes towards the interview by eliciting more negative responses to questions which asked specifically about length; and (4) generally, increasing the effort required to complete the respondent's task (retrieval of records) had no effect on behavioral or attitudinal indicators of respondent burden. (Author/RL)

THE EFFECT OF INTERVIEW LENGTH AND QUESTION TYPE ("EFFORT") ON PERCEIVED RESPONDENT BURDEN

by

Joanne Frankel

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BUREAU OF SOCIAL SCIENCE RESEARCH, INC.
1990 M Street, N.W.
Washington, D.C. 20036

BACKGROUND OF THE STUDY

Introduction

This paper describes Phase I of the Measurement of Respondent Burden, an experimental study conducted by the Bureau of Social Science Research for the Department of Housing and Urban Development. The focus of the study is upon correlates of self perceived respondent burden, that is factors associated with the presence of negative feelings such as annoyance, frustration or inconvenience which may be experienced by survey participants. The study is limited to survey situations in which face-to-face interviews are conducted in respondents' homes.

The issue addressed by this research are of interest to HUD in connection with its sponsorship of the Annual Housing Survey (AHS), a face-to-face household survey which is the primary source of information about the condition of the nation's housing supply. The level of refusal rates in the AHS, reports from field observers, and occasional complaints by individual respondents have caused concern within HUD with the burden which the survey may be imposing upon AHS respondents.

The issue of respondent burden is also of interest to a wider audience of survey and evaluation researchers, who are concerned with maintaining or improving response rates in their data collection activities, and to government personnel charged with managing or regulating Federally-sponsored data collection efforts. The present research is intended to provide information which will be useful to this broader research community, including both sponsors and performers of education

research, especially that research involving voluntary face-to-face data collection from individuals, such as community members, parents, and students.

The Study Design

The study is being implemented in two phases. During the first phase, we focused on testing two conflicting theories: the conventional wisdom of many laymen and practitioners that longer interviews and questions requiring some special effort on the part of the respondent will increase respondent burden, versus the hypothesis of some survey research methodologists that long questionnaires and special efforts may actually reduce burden by emphasizing the importance of the survey in the eyes of the respondent. To assess this issue, both interview length and respondent effort were manipulated during the first phase of the survey, and their effect upon respondent burden was assessed.

Interview length was operationally defined as "number of minutes of interview time," with 25 and 75 minute treatments used. The "effort" variable was also separated into two treatments: recall, in which respondents were asked to provide estimates based on memory for answers to selected expenditure questions, and retrieval, in which respondents were asked to consult checkbooks or other records to answer these questions.

The length and effort variables were crossed to create four treatment groups, each of which received a different version of the interview: a short recall interview (Group 1), a long recall interview (Group 2), and short and long retrieval interviews (Groups 3 & 4). The total study sample size was 500 (see Figure 1). All versions of the interview instrument were based on the Annual Housing Survey, and contained a wide range of items about family composition, housing characteristics, energy use, transportation, neighborhood characteristics, etc.

FIGURE 1

STUDY DESIGN

	Group 1		Group 2		Group 3	Group 4
	25 Minute Instrument, Recall Effort Only		75 Minute Instrument, Recall Effort		25 Minute Instrument, Record Retrieval Required	75 Minute Instrument, Record Retrieval Required
	Group 1A	Group 1B	Group 2A	Group 2B		
N =	75	100	75	100	75	75
Phase I Interview	✓	✓	✓	✓	✓	✓
Phase I Debriefing	✓		✓		✓	✓
Phase II Interview		✓		✓		
Phase II Debriefing		✓		✓		

Respondent burden was measured by direct questioning of the respondent through a self-administered reaction form, which was given at the conclusion of each "treatment" interview. (For 100 of the respondents in Group 1 and 100 in Group 2, the reaction form was not used since these respondents will be reinterviewed for the second phase of the study.) Respondent burden was also assessed indirectly by examining item response rates and other behavioral indicators for the various treatment groups.

All interviews for Phase 1 were conducted in the suburbs of Philadelphia during February, 1980. The study sample consisted of a total of 75 household clusters; within each cluster all Phase 1 treatments were used. An eligible respondent was defined as a household member who was "knowledgeable about household expenditures." If households could not be contacted after 4 attempts, or if the householder refused to be interviewed, the sampling scheme provided for the selection of a substitute household.

For the second phase of the study, the effort variable was eliminated, and the third manipulated variable--single vs. repeat administration of identical questions over time--was introduced. The second round of interviews was conducted approximately 10 months after the first interview with 200 respondents from the Phase 1 sample. Data from this phase are currently being analyzed, and are not reported here.

I. Findings: Phase I

The study findings summarized below should be interpreted with two factors in mind:

1. The interviews were conducted in households located in a predominantly white middle class suburb. Therefore, the study findings may not be applicable to other populations, for example, persons living in rural areas or in inner cities, or to other types of interview situations.

2. The interview dealt with topics of moderate salience for most respondents; most questions sought factual information, rather than opinion or attitude data. The results of the study might have been quite different if more (or less) respondent-pertinent topics had been discussed, or if opinion or attitude questions had been emphasized.

Differences Between Respondents and Refusers

To achieve 500 interviews a total of 886 household were contacted; in 184 cases no contact could be established, and in 202 cases, the householder refused to be interviewed. No attempt was made in this study to convert initial refusals, but a brief interview was conducted with those refusers who cooperated (N=107). The 202 persons refusing to be interviewed constituted 29 percent of those contacted for the survey. Although respondents were younger than refusers, no other significant differences between the two groups were found in terms of demographic characteristics, or for those variables which might have affected the interview situation (i.e., time of day of the attempted interview, or experience of the interviewer involved). However, refusers and respondents differed in their

general attitudes towards the usefulness of surveys, and in their past participation in interview situations, with refusers less likely to rate surveys as useful, and less likely to have participated in previous surveys.

• While the time required for an interview was frequently the reason given for the refusal, the actual length of time when announced to the respondent at the door--i.e., 25 or 75 minutes--did not seem to contribute in any appreciable way to the tendency to refuse. The percentage of refusals occuring after the specific time was mentioned was virtually identical (about 38%) for both the long and short interview groups.

• Moreover, the interviewers' prior knowledge of the length of the interview to be attempted was not related to the overall percentage of refusals obtained, which was 27 percent for the short vs. 30 percent for the long form.

General Reactions to the Survey

Among the 500 persons consenting to be interviewed, reactions to the survey were overwhelmingly positive. Only two of these respondents broke off the interview prior to completion (both of these were in the long interview group). Large majorities felt that the interview was at least somewhat interesting (87%) and important (88%), and that their time and effort were at least somewhat well spent (90%). Eighty percent said that they would be willing to be reinterviewed next year.

Relationship of Respondent Burden to Interview Length and Effort

• Table 1 summarizes some of the key findings with respect to interview length, effort, and self-reported burden.

• No relationship was found between interview length and overall item nonresponse. On the average, both the long and short interview groups failed to answer only about three percent of the questions they were asked.

• However, interview length was associated with willingness to be re-interviewed with 14 percent more of the short interview subjects indicating that they would be willing to allow the interviewer to return next year.

• Interview length also affected attitudes towards the interview, but only to the point of eliciting more negative responses to questions which asked specifically about length. The longer questionnaire was not seen as being more of an overall nuisance (Table 2), or as being more or less interesting, important, or difficult than was the shorter interview.

• In general, increasing the effort required to complete the respondent's task (retrieval of records) had no effect on behavioral or attitudinal indicators of respondent burden. For example, there were no significant differences between the recall and retrieval groups in item nonresponse rates (which were 2.89% and 2.82% respectively), in willingness to be reinterviewed (80% of both groups agreed), nor in the proportions of respondents within each group who felt that the interview was uninteresting, unimportant, not time well spent, etc. In short, asking respondents to retrieve records neither created a burden (as is assumed by some practitioners) nor did it generate a more positive

TABLE 1

RESPONDENT BURDEN INDICATORS, BY INTERVIEW LENGTH, EFFORT AND TREATMENT
(In Percentages)

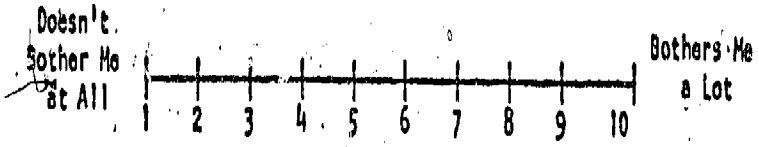
Indicators	Length		Effort		Treatment				TOTAL	
	Short	Long	Recall	Retrieval	Short Recall	Long Recall	Short Retrieval	Long Retrieval		
1. Behavioral										
• Average item nonresponse rate	2.7	3.0	2.9	2.8	2.8	2.9	2.4	3.2	2.9	
Significance	n.s		n.s		n.s					
									(N)	%
• Respondent reported by interviewer as "preoccupied" during interview	5	14	10	8	6	14	4	12	(46)	9
Significance	p ∠ .01		n.s		p ∠ .05					
• Respondent unwilling to be reinterviewed next year	13	27	20	20	14	26	11	29	(56)	20
Significance	p ∠ .01		n.s		p ∠ .05					
2. Attitudinal										
A. Answers to Questions Concerning Interview Length:										
• Interview was "too long"	13	47	31	29	11	51	15	42	(85)	30
Significance[a]	p∠.0001		n.s		p∠.0001					
• Use of shorter questionnaires "would be an improvement"	34	57	45	46	33	57	35	57	(122)	45
Significance	p∠.0001		n.s		p ∠ .01					
• Overall, time and effort put into answering questions was "not very well spent"	5	14	9	10	4	14	6	14	(27)	10
Significance	p ∠ .05		n.s		n.s					
B. Answers to Questions Concerning Other Aspects of the Interview										
• Overall interview was "not very interesting" or "not at all interesting"	13	13	14	13	11	17	16	10	(38)	13
Significance	n.s		n.s		n.s					
• Survey was "not important"	10	15	14	10	10	20	10	11	(36)	12
Significance	n.s		n.s		n.s					
• On the whole, answering the questions was "hard" or "very hard"	4	6	5	6	4	6	4	7	(15)	5
Significance	n.s		n.s		n.s					
Number Responding	14-147	136-143	139-146	141-144	70-74	67-72	71-73	69-71	(286-290)	
Missing Cases	2-8	4-11	2-9	4-7	1-5	1-6	1-3	3-5	(6-10)	

[a]Significance based on chi-square test on collapsed variables, e.g., too short/about right vs. too long.

TABLE 2

RATING THE "NUISANCE VALUE" OF THE SURVEY AND OTHER COMMON TASKS

"From time to time, we are all called upon to do various things which we may not particularly enjoy. In fact, some of these may be a downright 'nuisance.' We would like to know much taking part in this survey bothered you as compared to doing other common tasks." (FOR EACH TASK PUT DOWN THE NUMBER ON THE SCALE--1 THROUGH 10--WHICH BEST DESCRIBES HOW MUCH THE TASK BOTHERS YOU.)



	Short Recall $\bar{X}$	Short Recall SD	Long Recall $\bar{X}$	Long Recall SD	Short Retrieval $\bar{X}$	Short Retrieval SD	Long Retrieval $\bar{X}$	Long Retrieval SD	TOTAL $\bar{X}$	TOTAL SD	Number Responding	Missing Cases
a. Answering the interviewer's questions during this survey . . .	2.68	2.40	3.03	2.60	2.62	2.22	2.74	2.18	2.77	2.34	(280)	(16)
b. Filling out income tax forms . .	5.76	3.38	6.03	3.62	6.64	3.53	6.06	3.37	6.13	3.47	(268)	(28)
c. Balancing checkbook against bank statement	3.86	3.00	4.39	3.03	4.46	3.08	4.72	3.28	4.36	3.10	(267)	(29)
d. Answering a public opinion survey about which political candidate you like better. . . .	4.87	3.06	5.12	3.17	4.53	3.41	5.22	3.15	4.93	3.19	(273)	(23)
e. Going to the polls to vote on election day	2.59	2.50	2.64	2.53	2.07	2.27	3.16	2.88	2.61	2.57	(274)	(22)
f. Getting your car inspected by the state	4.82	3.59	4.43	3.02	4.17	3.32	5.12	3.78	4.63	3.44	(267)	(29)

reaction by conveying to the respondents the suggestion that the survey was very important.

• The actual behavior of persons assigned to recall and retrieval groups did not always conform to instructions; some "recall" respondents chose to check their records, and some "retrieval" respondents did not comply with this instruction. When effort was examined as a behavioral rather than as a manipulated variable--that is, when respondents were grouped by the percentage of times they actually checked their records--no significant relationships between effort and indicators of burden were found. However, in both groups, persons who never referred to their records at all expressed negative attitudes more frequently than did other respondents. Therefore, there may be some association between feelings of burden, unwillingness to exert efforts in the interview situation, and, therefore, data quality which this particular study was not designed to probe fully.

Interview Length and Respondent Burden, with Other Factors Considered

The relationship between respondent burden and interview length was examined with other variables (both attitudinal and demographic) held constant. The key finding emerging from this analysis was that a general belief in the efficacy of surveys is an important factor influencing the extent to which interviews of various lengths will be perceived as burdensome. That is, among respondents agreeing that "answering surveys is of direct benefit to the people who answer," the relationship between length and key indicators of burden is weakened. For example, for this

group, the percentage refusing to be reinterviewed is generally low, no matter if the short (8%) or the long (10%) treatment had been applied. In contrast, for respondents who do not agree that surveys are beneficial, the relationship between length and burden becomes much stronger. For this group, the percents refusing to be reinterviewed are 19 percent for the short and 44 percent of the long interview groups (a difference of 25%). (See Table 3.)

Length, Effort, and Data Quality

- Based on the limited measures available in this study, no relationship was found between interview length and either self-reported estimates of data accuracy, or data completeness, as measured by item nonresponse. Contrary to commonly held assumptions, item nonresponse did not increase during the course of the long interview. Rather, item nonresponse was a function of question sensitivity, with income questions asked at the beginning and end of the interview eliciting a similar (relatively high) level of nonresponse.

- No general relationship between record checking and self-reported estimates of data quality was found. Although, on the average, retrieval respondents did refer to records more frequently than those asked to rely on memory, differences in perceived accuracy of response between the two groups, while in the expected direction, were not statistically significant. Only among persons favorably predisposed toward surveys, did a significantly greater proportion of retrieval than of recall respondents perceive their responses as "very accurate."

TABLE 3

DIFFERENCES BETWEEN SHORT AND LONG INTERVIEW GROUPS IN WILLINGNESS TO BE REINTERVIEWED NEXT YEAR, WHEN ATTITUDES TOWARDS SURVEYS ARE CONTROLLED

Attitudinal Characteristic	Unwilling to be Reinterviewed Next Year					
	Short		Long		Significance	Gamma
	%	(Base N)	%	(Base N)		(Zero Partial)
					(p. 4)	
Answering survey is of direct benefit to the people who answer:						.41
Strongly agrees/agrees	8	(78)	10	(71)[a]	n.s	.14
Strongly disagrees/disagrees	19	(53)	44	(57)	.01	.54
By taking part in surveys I can affect the government's decisions:						.43
Strongly agrees/agrees	11	(82)	17	(75)	n.s	.26
Strongly disagrees/disagrees	16	(50)	40	(55)	.01	.56

[a]The distribution for those who agreed strongly (N=22) was as follows: Short interview group (N=12); long interview group (N=10). All of these persons were willing to be reinterviewed.

Implications of the Study Results

The findings summarized above have a number of theoretical and practical implications for researchers and survey sponsors.

1. Although it would no doubt be appropriate to test other "effort" treatments, the findings suggest that effort as operationalized for this study (i.e., asking respondents to provide estimates vs. asking them to check records) does not affect self-perceived respondent burden.

2. Before entrance to the household is gained, the disclosed length of an interview does not appear to affect refusal decisions. As suggested by this and other current research, burden concerns do not appear to be the primary reason for most refusals.

3. However, based on our findings, the conventional wisdom about the burdensomeness of lengthy interviews finds some support when applied to those persons who have agreed to be interviewed, at least for a "general interest" survey which does not deal with matters highly germane to the interests of the respondent. (As noted earlier, the burdensomeness levels for interviews dealing with highly respondent-pertinent issues, or for interviews seeking opinions rather than factual information, may be very different.)

4. Belief in the efficacy of surveys clearly emerged as an important element affecting feelings of burden, perhaps even overshadowing actual interview length. The findings suggest that it is not a question so much of the importance of the specific survey itself as a more general belief in the efficacy of surveys (or perhaps in the efficacy of individuals to affect the actions of decision-makers) which is operative. It follows, therefore, that to reduce self-perceived burden, it is important to convey

to potential respondents the importance and usefulness of the survey method, and the likelihood that survey data will be used by survey sponsors.

5. Finally, it is important to re-emphasize that the current research findings are based on a situation involving voluntary face-to-face household interviews. These findings will hopefully be informative to education researchers who conduct studies in similar situations. For example, our findings may be applicable to efforts involving personal interviews with community members, parents, or students. However, our findings may not necessarily apply to other contexts in which education research is typically conducted--for example, to research involving mandatory data collection from school administrators, or to research involving "captive audiences" such as classroom teachers or support personnel. Measurement of respondent burden under these latter conditions will require research specifically targetted to those contexts.